

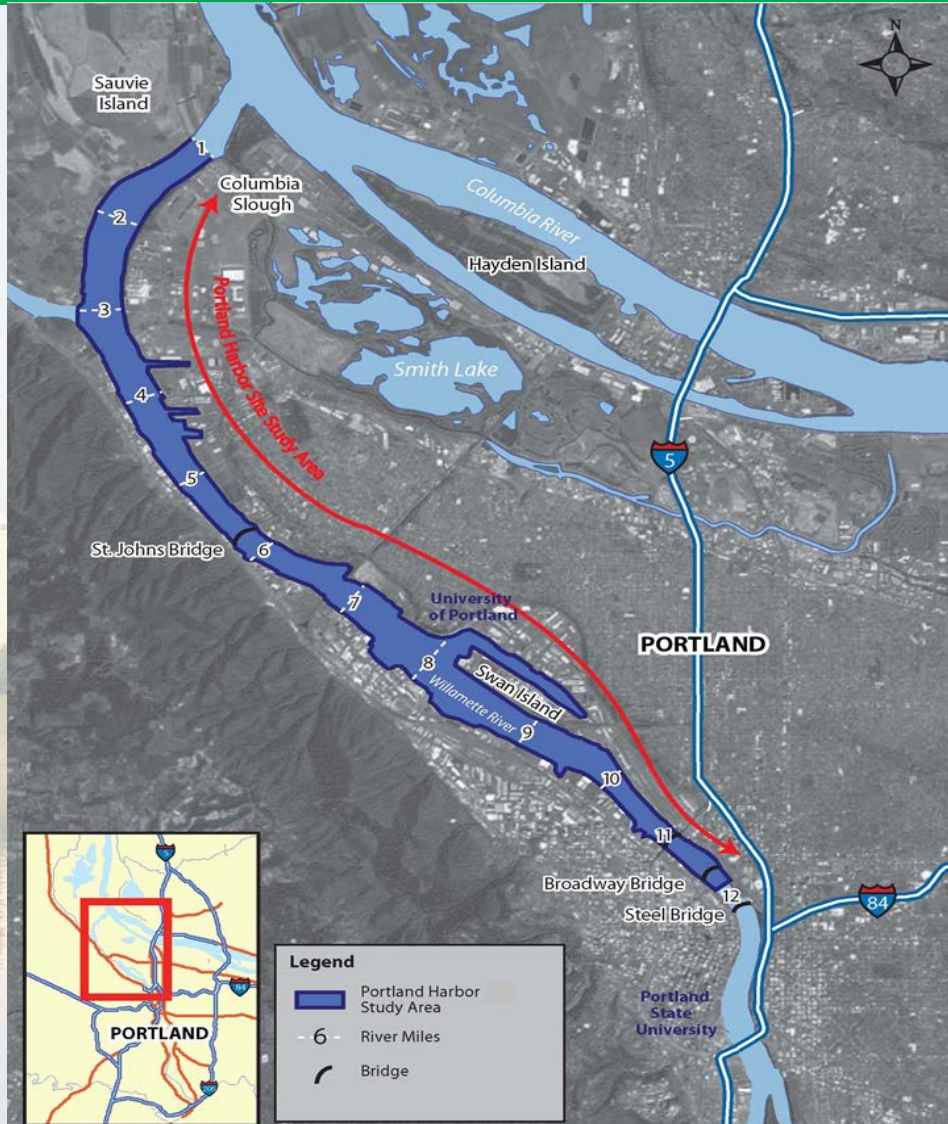


Portland Harbor Superfund Site

- **Where is it?**
- **Superfund Process**
- **Site Information**
- **Process Moving Forward**



Where is Portland Harbor?



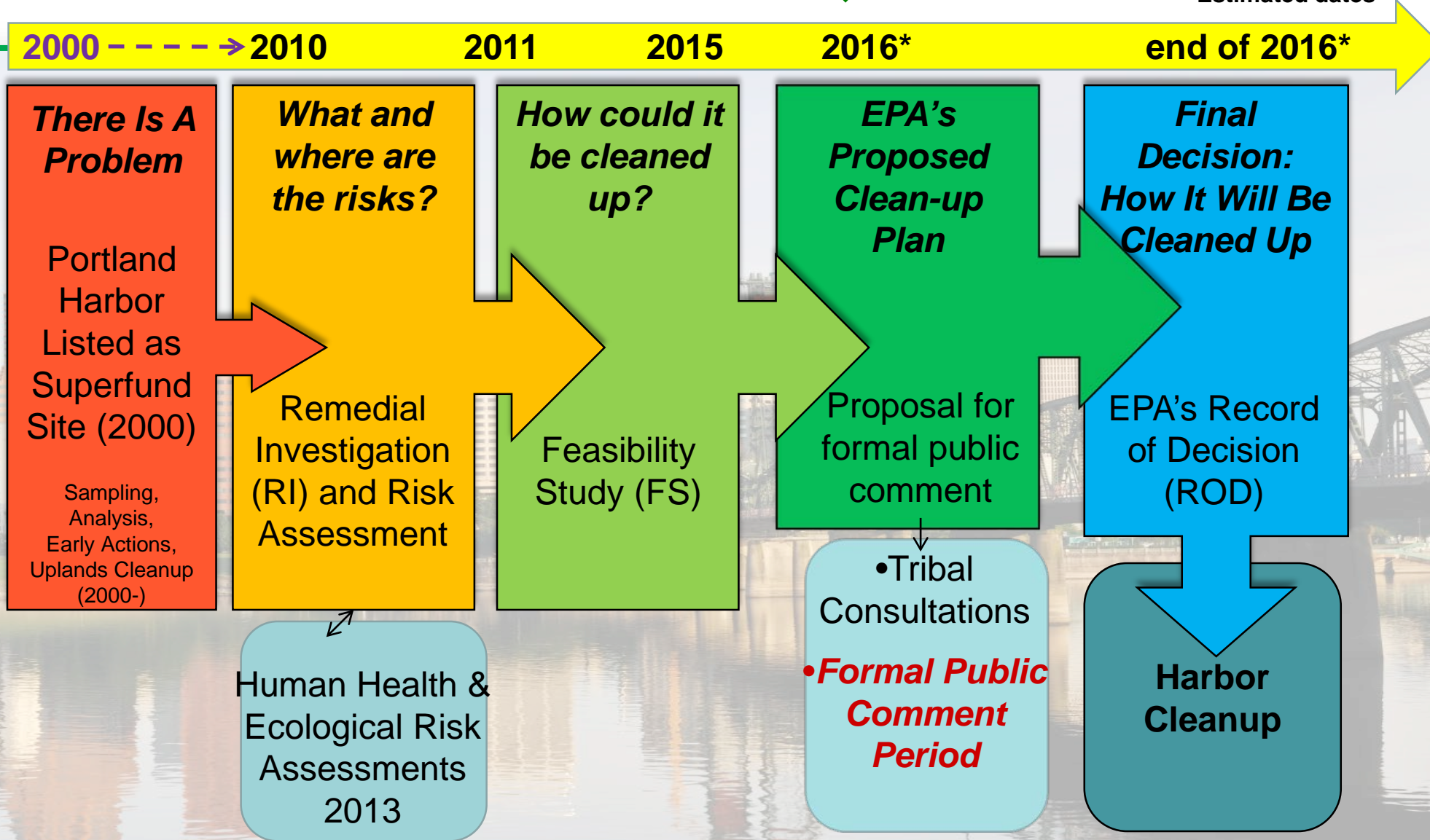
- Industry
- Recreation (boating, swimming, camping)
- Fishing
- Shipping/Navigation
- Ecological habitat
- Tribal fishing and ceremonial practices
- Migratory corridor for salmon



Where is Portland Harbor in the Superfund Process?

↓ We are here

*Estimated dates





How did Portland Harbor become contaminated?



- Ship building, repair & dismantling
- Wood products & wood treating
- Chemical manufacturing and distribution
- Metal recycling, production & fabrication
- Manufactured gas production
- Electrical production & distribution
- Bulk fuel distribution & storage
- Asphalt manufacturing
- Steel mills, smelters & foundries
- Commodities shipping terminals
- Rail yards

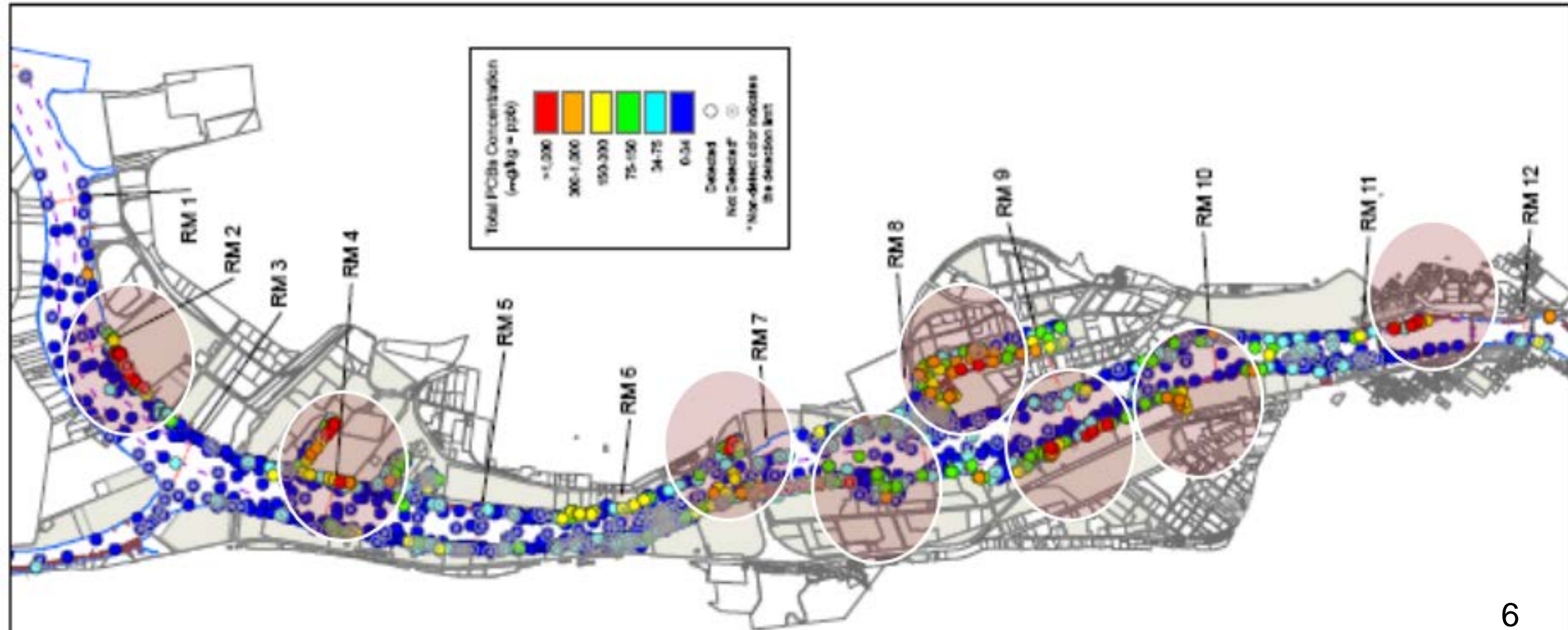


What are the pollution issues?

- **65 contaminants of concern**
 - Metals
 - Pesticides/Herbicides
 - Dioxins/Furans
 - PCBs
 - PAHs
- **“Persistent organic pollutants”**
 - not readily broken down in the environment
- **Widespread vs. local contamination**

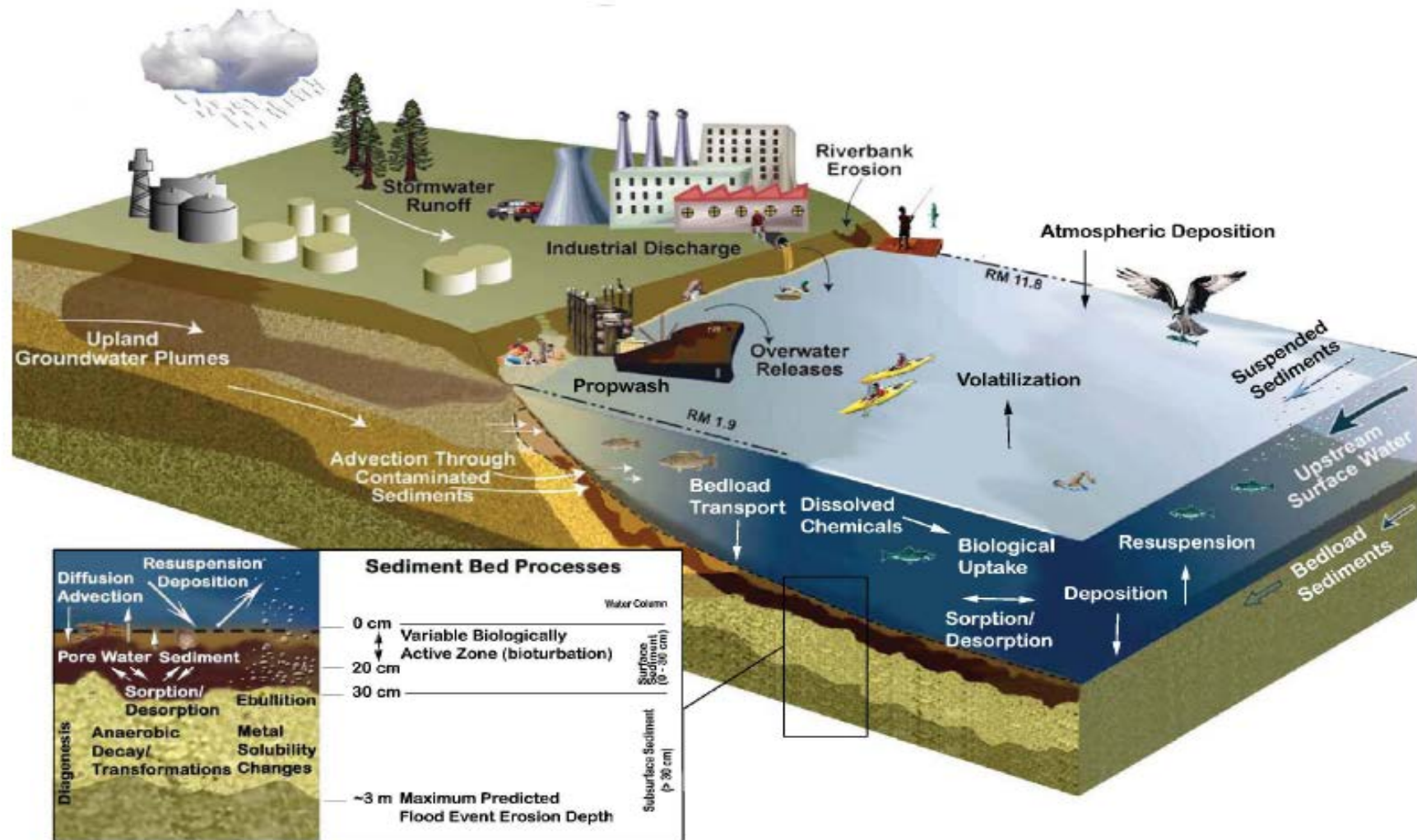


Where is the contamination?





How did contamination get to the river?



SOURCE: Figure created from PDF provided by Integral Consulting, Inc.



What are the impacts to wildlife and fish?



- **Worms and bugs exposed to contaminants in river bottom**
 - Survival, reproduction and growth
- **Fish accumulate contaminants through food chain and exposure**
- **Birds and mammals feed on fish and bugs**

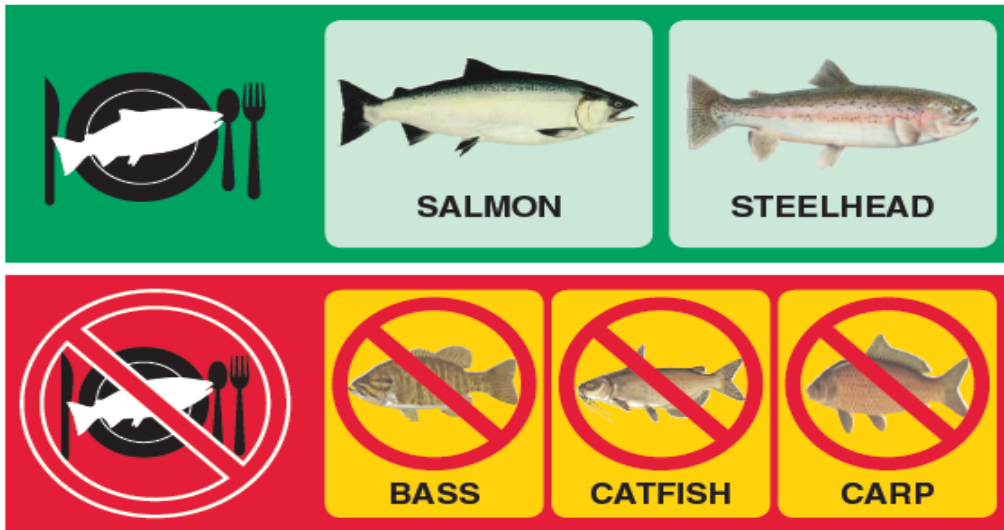


What are the risks to people?

FISH ADVISORY

Atención Chú y 注意 Внимание 注意

Fish from these waters may be harmful to eat, especially for children, pregnant or nursing women, and women of childbearing age.



More information call 1-877-290-6767
www.healthoregon.org/fishadv

Oregon
Health
Authority

- Mainly from eating contaminated fish
- Resident fish pose greatest risk
 - carp, bass, catfish
- Children and infants are most vulnerable



What are the cleanup methods?

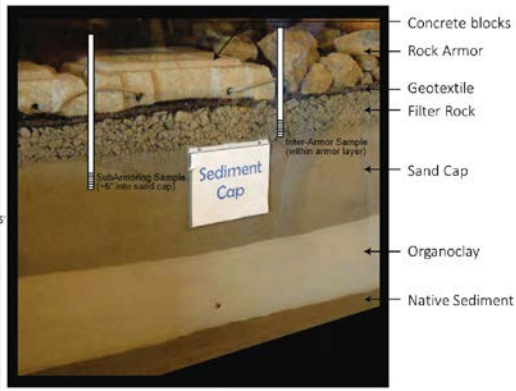
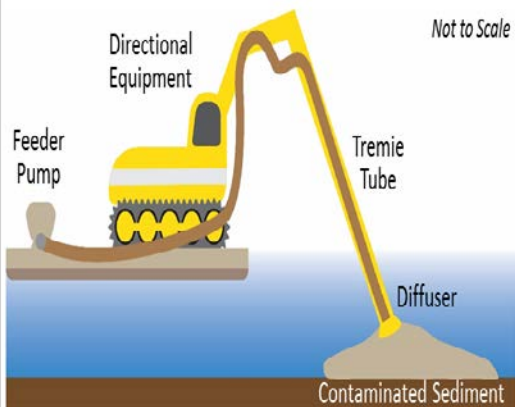
Dredging



Capping

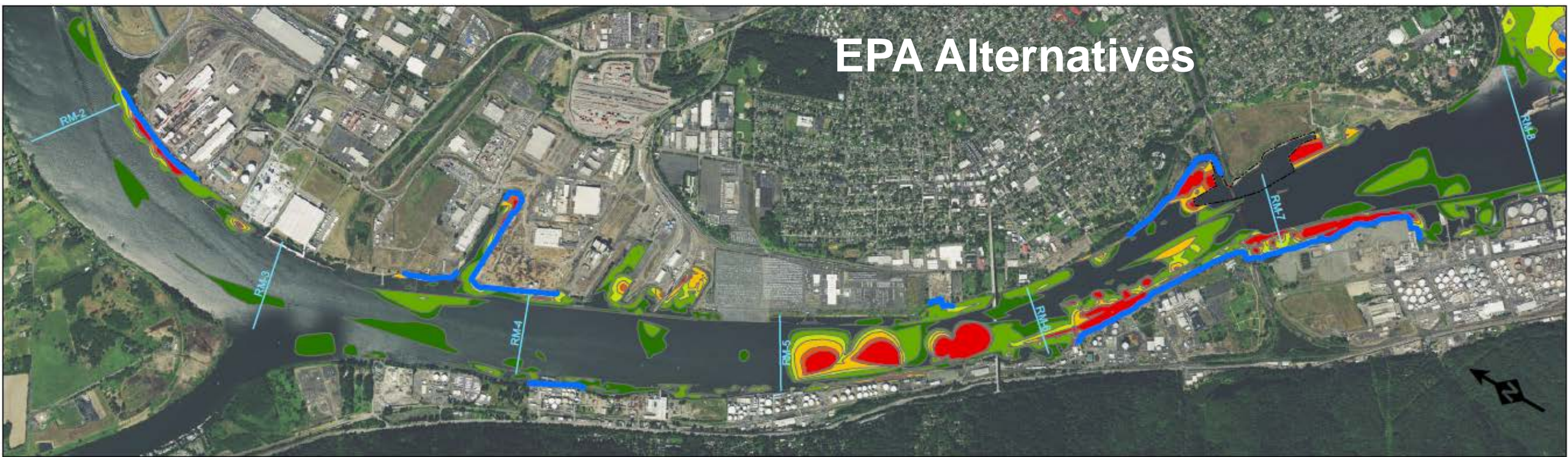


Treatment



- Dredging
- Capping
- In-situ Treatment
- MNR/EMNR

EPA Alternatives



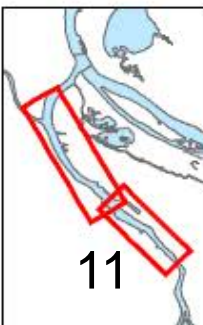
Legend

— Site with Known Contaminated Riverbank

Alternative SMAs

- Alternative B
- Alternative C
- Alternative D
- Alternative E
- Alternative F
- Alternative G

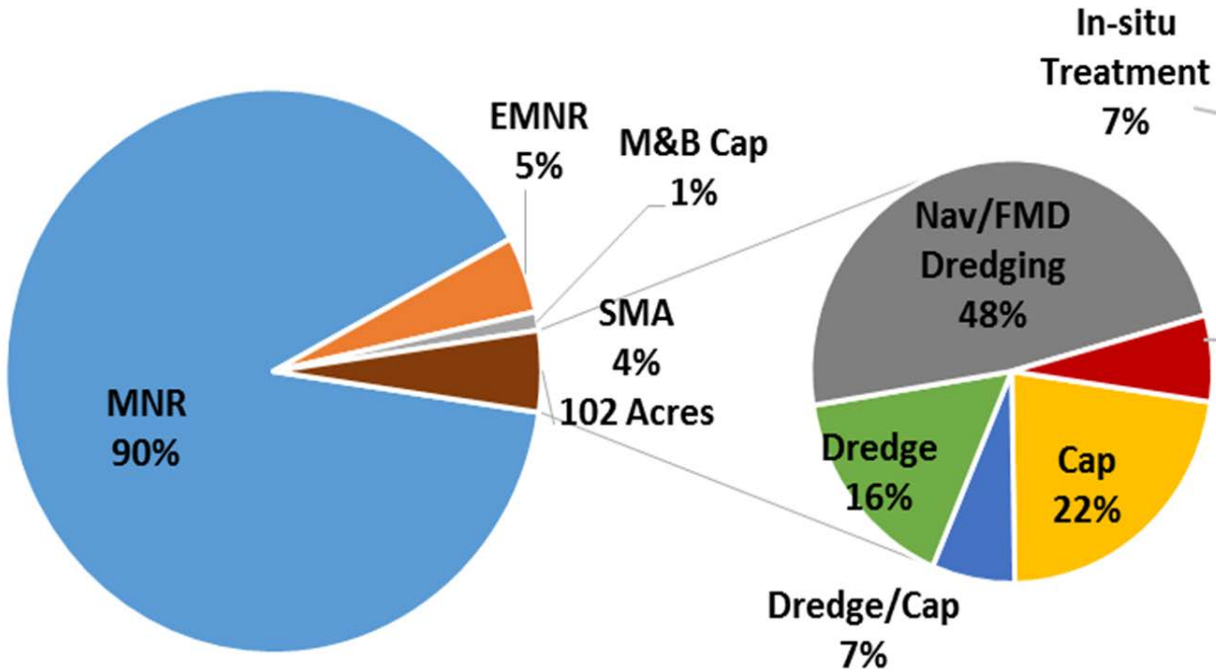
0 1,000 2,000 3,000 4,000
Feet



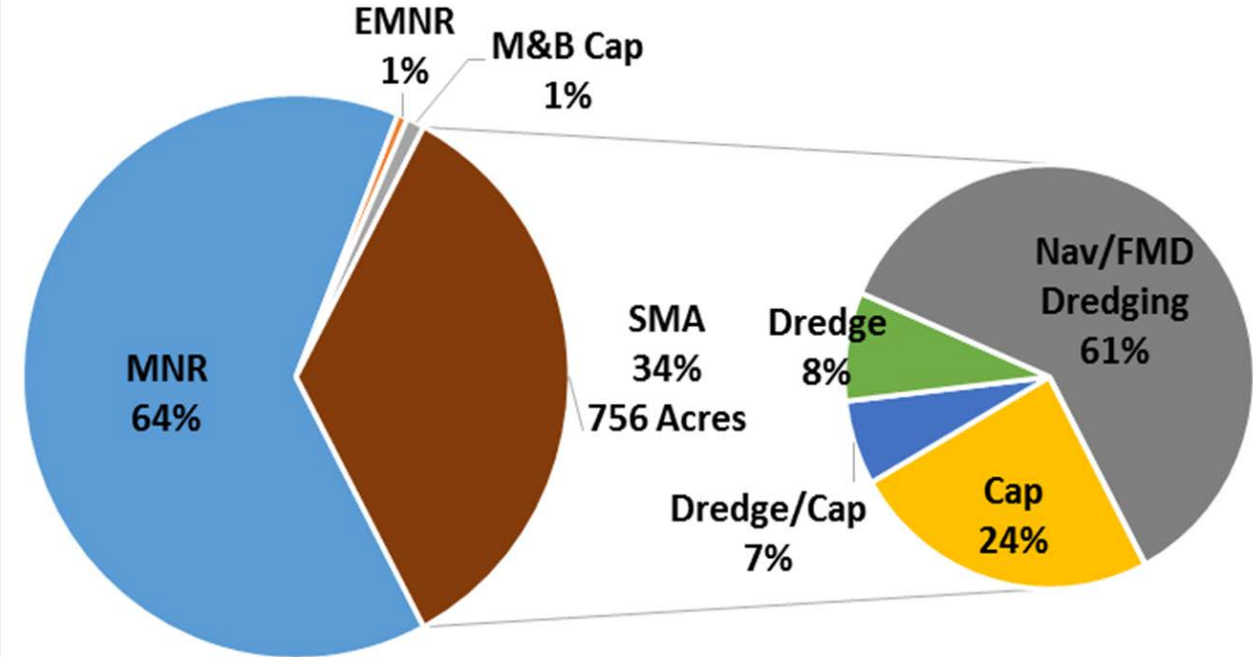


What are the Cleanup Options?

Alternative B



Alternative G





How and when should the community engage?

- **Participate in information sessions:**
 - ✓ Feb 11th - 7pm, Matt Dishman Center
 - ✓ Feb 18th - 6:30pm, Wilson HS Cafeteria
 - ✓ March 3rd - 7pm Webinar – more info coming soon!
 - ✓ March 17th - 7pm, SE Portland, Location TBD
 - ✓ March 19th - 1pm, Matt Dishman Center
 - ✓ March 26th - 12noon OMSI (OR Museum of Science and Industry)
- **April – Proposed Plan, Public review & comment**
 - ✓ Series of public meetings
 - ✓ Oral comments
 - ✓ Written comments
 - ✓ Email comments
 - ✓ Postal mail



EPA's Portland Harbor Web page: <http://go.usa.gov/3Wf2B>